

GAS DISTRIBUTION SHOWERHEAD

ABSTRACT OF THE DISCLOSURE

A gas distribution showerhead is designed to allow deposition of uniformly thick films over a wide range of showerhead-to-wafer spacings. In accordance with one
5 embodiment of the present invention, the number, width, and/or depth of orifices inlet to the faceplate are reduced in order to increase flow resistance and thereby elevate pressure upstream of the faceplate. This elevated upstream gas flow pressure in turn reduces variation in the velocity of gas flowed through center portions of the showerhead relative to edge
10 portions, thereby ensuring uniformity in thickness of film deposited on the edge or center portions of the wafer.

23299444 v1